

**WHAT IS CLAIMED IS:**

1. A sheet processing apparatus comprising a stacking tray for stacking sheets formed with indicia thereupon, a processing tray for receiving said sheets in the process leading to said stacking tray ; a path to discharge directly to said stacking tray and a path  
5 to discharge said sheets to said stacking tray via said processing tray, said paths being selectable, to sort a leading plurality of sheets directly discharged to said stacking tray and a subsequent sheet set on said processing tray and by discharging a set to said stacking tray via said processing tray changing the relative positions of the leading sheet set and subsequent sheet set on said stacking tray.
- 10 2. The sheet-sorting apparatus of claim 1 further comprising a shifting means for shifting said sheets straddling said stacking tray and said processing tray in the process via said processing tray.
3. The sheet-sorting apparatus of claim 1 further comprising a waiting time set for sheet transfer between the leading set of copies and the subsequent set of copies wherein  
15 a leading plurality of sheets are handled as a single set discharged directly to the stacking tray and subsequent sheet sets to be discharged as sets to the stacking tray via the processing tray.

4. The sheet-sorting apparatus of claim 2 further comprising a waiting time set for sheet transfer between the leading set of copies and the subsequent set of copies wherein a leading plurality of sheets are handled as a single set discharged directly to the stacking tray and subsequent sheet sets to be discharged as sets to the stacking tray via the processing tray.

5. The sheet-sorting apparatus of claim 1 wherein a leading plurality of sheets directly discharged to said stacking tray and a subsequent sheet set discharged to said stacking tray via said processing tray are handled as a single group and the leading group and subsequent group are sequentially discharged to the stacking tray.

10 6. The sheet-sorting apparatus of claim 2 wherein a leading plurality of sheets directly discharged to said stacking tray and a subsequent sheet set discharged to said stacking tray via said processing tray are handled as a single group and the leading group and subsequent group are sequentially discharged to the stacking tray.

15 7. The sheet-sorting apparatus of claim 1 wherein a leading plurality of sheets directly discharged to said stacking tray and a subsequent sheet set discharged to said stacking tray via said processing tray are handled as a single group and the leading sheet set discharged from the processing tray for the leading group and at least one page of the sheets discharged directly to the stacking tray for the subsequent group are overlapped

and discharged to the stacking tray.

8. The sheet-sorting apparatus of claim 2 wherein a leading plurality of sheets directly discharged to said stacking tray and a subsequent sheet set discharged to said stacking tray via said processing tray are handled as a single group and the leading sheet set discharged from the processing tray for the leading group and at least one page of the sheets discharged directly to the stacking tray for the subsequent group are overlapped and discharged to the stacking tray.

9. A sheet-sorting apparatus to sort a predetermined number of sheets having; a stacking tray to stack sheets formed with indicia thereupon; a processing tray to stack sheets temporarily in the process leading to said stacking tray; a shifting means to change the accumulated stacked position of sheets on said processing tray; a capacity recognition means to recognize the stacked amount of sheets to stack on said processing tray;

the operation of the shifting means to make the position of the leading discharged sheets on the processing tray and the position of the subsequent sheets the same while discharging sheets stacked on said processing tray to said stacking tray when it is recognized that the stacking limit capacity of said processing tray has been surpassed by the sheets stacked on said processing tray.

10. In the sheet-sorting apparatus of claim 9 said capacity recognition means

temporarily stops the stacking of subsequent sheets onto said processing tray when it is recognized that the amount stacked on the sheets on said processing tray has exceeded the stacking limit of said processing tray.

11. In the sheet-sorting apparatus of claim 9 said capacity recognition means  
5 comprising a counting means for counting the number of sheets stacked on processing tray.

12. In the sheet-sorting apparatus of claim 9 said capacity recognition means comprising a level sensor means to measure the height level of the sheets stacked on said processing tray.

13. In a <sup>11</sup>image-processing unit to form images upon sheets provided with a sheet processing apparatus for sorting, stapling or opening holes in sheets discharged from said image-processing unit, the sheet processing apparatus having a stacking tray means for stacking sheets formed with indicia thereupon, a processing tray means for receiving said sheets in the process leading to said stacking tray means; a path to discharge directly to  
15 said stacking tray means and a path to discharge said sheets to said stacking tray means via said processing tray means, said paths being selectable, further provided with a control mechanism to sort a leading plurality of sheets directly discharged to said stacking tray and a subsequent sheet set discharged to said stacking tray via said processing tray by

handling said sets as a single group and the leading group and subsequent group are sequentially discharged to the stacking tray.